ATTACHMENT D
Sample Watershed Restoration Project Scope of Work

2.0 Scope of Work

Task 1 – Poorman Creek Culvert Replacement

The road crossing of Poorman Creek is located in section 36 T14N R9W. Two 48" equivalent pipe arches (54X40 inches) are in place at this location with about 2.5 feet of fill over the culverts. Pipes are about 33 and 36 feet in length and velocities at low flow in August were measured at 2.3 and 3 fps, respectively. This crossing is estimated to provide for flows of up to 220 CFS without over-topping and is believed to be at high risk of washout during a 25 year flood event where estimated flows are 360 CFS. After replacing the culverts the stream should return to its normal function in the process accommodate the needs of all aquatic species. This design includes but it not limited to placing habitat rocks in the stream, constructing stream banks within the stream or simulating the stream roughness by placing riprap along the edge of the structure, and constructing a thalweg within the structure. Every effort is made to mimic the meanders, steps and pools within the structure. A bridge with flow-through abutments would be the best alternative for this site allowing for stream simulation while maintaining the existing road grade. The structure would be approximately 32' long depending on the slope of the riprap under the abutments. Pre and post project road surface erosion surveys will be conducted at each site by the contractor using the Washington Method and other methods described in the approved "Middle Blackfoot/Nevada Creek Road Assessment QAPP/SAP" (River Design Group 2005). A SAP for in-channel monitoring will be developed based on in-stream sediment targets for Poorman Creek.

Task 1 Responsible Parties: Blackfoot Challenge, Helena National Forest, Lewis and Clark County

Task 1 Timetable: July 2007 – January 2009

Task 1 Funding:
Total Costs: $138,350.00
319 Costs: $32,000.00 ($30,000.00 – project; $2,000.00 – monitoring)
Non-Federal: $21,350.00 ($20,000.00 Unsecured. A Future Fisheries grant will be written for this project. $1,350 for monitoring secured by Blackfoot Challenge)
Federal: $55,000.00 (Secured); $30,000.00 (Unsecured. A Federal Road improvement grant has been written for this project)

Task 1 Outputs: The contractor will submit the project design for DEQ approval along with a list of landowner agreements, permits, construction contracts, and oversight notes. A final report with pre and post-project photos will document completion of the project. The contractor will conduct pre and post project monitoring to assess project effectiveness tied to sediment reduction and in-stream sediment targets. A SAP will be submitted to DEQ for approval prior to project monitoring. Pre project data will be

provided to DEQ for estimation of sediment load reductions. The contractor will also complete a report that summarizes the project, monitoring activities, and assesses the effectiveness of the project tied to sediment reduction and in-stream sediment targets through comparison of pre and post restoration monitoring data. All data collected will be entered into STORET by the contractor using the WebSIM application upon completion of pre and post project monitoring activities.

Task 1 Acceptance Criteria: The final design plan should either be in electronic format or on paper that is no larger than legal size. The design must be approved before completing the restoration project. The final report will be submitted in hard copy and electronic format. All data collected will be entered into STORET using the WebSIM application by the contractor. DEQ will provide user support to make this occur. Contract deliverable to allow payment for data management is a screen shot from WebSIM stating successful data load.

Task 2 – Cottonwood Creek Bridge Installation Project

The Cottonwood Creek Bridge Installation Project is located in T16N, R14W, Section 11. The undersized stream crossing pipe will be replaced with a steel plate crossing structure placed on concrete footings). Dimensions of the new steel plate and concrete footing structure are: 21' (steel) wide x 42' (steel) long x 6'10" high (concrete footing set 3' into bed). Three boulder and log weirs will likely be constructed on the downstream side of the new structure to help restore and stabilize a channel gradient that allows fish passage yet minimizes future channel adjustment and cutting. Fill slopes and stream banks will be reclaimed using mulch and Lolo seed mix to establish annual vegetation on exposed surfaces. Slash filter windrows will also be used to arrest sediment transport from road bed and fill surfaces to the stream channel. Stream banks will be planted with hardwood cuttings at the appropriate time. Pre and post project road surface erosion surveys will be conducted at each site by the contractor using the Washington Method and other methods described in the approved "Middle Blackfoot/Nevada Creek Road Assessment QAPP/SAP" (River Design Group 2005). A SAP for in-channel monitoring will be developed based on in-stream sediment targets for Cottonwood Creek.

Task 2 Responsible Parties: Blackfoot Challenge, BBCTU, Lolo National Forest, Missoula County

Task 2 Timetable: July 2007 – January 2009

Task 2 Funding:
Total Costs: $76,800.00
319 Costs: $9,000.00 ($7,000.00 – project; $2,000.00 - monitoring)
Non-federal: $30,000.00 (BBCTU – Secured)
Federal: $37,800.00 (Lolo National Forest – Secured)

Task 2 Outputs: The contractor will submit the project design for DEQ approval along with a list of landowner agreements, permits, construction contracts, and oversight notes. A final report with pre and post-project photos will document completion of the project. The contractor will conduct pre and post project monitoring to assess project effectiveness tied to sediment reduction and in-stream sediment targets. A SAP will be

submitted to DEQ for approval prior to project monitoring. Pre project data will be provided to DEQ for estimation of sediment load reductions. The contractor will also complete a report that summarizes the project, monitoring activities, and assesses the effectiveness of the project tied to sediment reduction and addressing in-stream sediment targets through comparison of pre and post restoration monitoring data. All data collected will be entered into STORET by the contractor using the WebSIM application upon completion of pre and post project monitoring activities.

Task 2 Acceptance Criteria: The final design plan should either be in electronic format or on paper that is no larger than legal size. The design must be approved before completing the restoration project. The final report will be submitted in hard copy and electronic format. All data collected will be entered into STORET using the WebSIM application by the contractor. DEQ will provide user support to make this occur. Contract deliverable to allow payment for data management is a screen shot from WebSIM stating successful data load.

Task 3 – Nevada Creek Restoration Project Design

The Blackfoot Challenge and North Powell Conservation District land stewards have identified four water quality restoration projects on Nevada Creek with a high level of interest from landowners. The contractor will design four water quality restoration projects on Nevada Creek based on conceptual plans discussed with landowners. Design work will include stream surveys, stream channel restoration designs, vegetation and grazing inventories, grazing management plans, riparian revegetation plans, and project mapping. These comprehensive project designs will address all water quality impairment causes on approximately 6,500 feet of Nevada Creek.

Task 3 Responsible Parties: Blackfoot Challenge and North Powell Conservation District

Task 3 Timetable: July 2007 – July 2008

Task 3 Funding: **Total Costs:** $36,250.00
319 Costs: $21,750.00
Non-federal: $14,500.00 (Blackfoot Challenge and NPCD – Unsecured)

Task 3 Outputs: Documentation of landowner contacts and participation, project designs, and best management and/or restoration activities implemented as a result of project designs.

Task 3 Acceptance Criteria: Four project designs for projects on Nevada Creek that focus on improving water quality using preliminary TMDL targets, that are supported by landowners, and will be submitted to the 319 Program or other funding sources for implementation.

Task 4: Blackfoot Headwaters Restoration Seminar

The Blackfoot Challenge and its partners will host a Restoration Seminar in Lincoln (the main community in the Blackfoot Headwaters planning area). The target audience will

be landowners in the Blackfoot Headwaters but more specifically, landowners with 303(d) listed streams on their property. The Restoration Seminar will involve a public presentation on water quality issues in the Blackfoot Headwaters as well as restoration opportunities and resources. Representatives from partners will be in attendance to answer questions about water quality and restoration efforts. The seminar will conclude with a field visit to the lower Poorman Creek project completed in 2004 and 2005 to show how water quality and fisheries have been improved through restoration. The intent of this seminar is to increase interest in restoration and raise awareness of water quality issues in this part of the watershed in order to more effectively implement restoration strategies described in the Blackfoot Headwaters Water Quality Restoration Plan and Sediment TMDLs. It is hoped that this seminar may also identify effective community leaders who can help direct implementation of the Blackfoot Headwaters TMDLs through participation in the Blackfoot Headwaters Restoration Work Group.

Task 4 Responsible Parties: Blackfoot Challenge

Task 4 Timetable: July 2007 – December 2007

Task 4 Funding: **Total Costs:** $1,700.00
319 Costs: $1,000.00
Non-federal: $700.00 (Unsecured. Intended sources – landowner and partner participation; Blackfoot Challenge program funds)

Task 4 Outputs: Documentation of completed seminar including PowerPoint Presentation, photos; topics discussed, landowner participation, and landowner responses.

Task 4 Acceptance Criteria: Seminar completed and a written summary of the seminar including photos, topics discussed, landowner participation, and landowner responses.

Task 5 – Blackfoot Restoration Partnership Coordination

The contractor will coordinate all projects under this grant. The contractor will work with local landowners, community leaders, and partners to initiate the Blackfoot Headwaters Restoration Work Group. Quarterly meetings of the Blackfoot Headwaters Restoration Work Group will be hosted beginning in 2007. Use the “Blackfoot Headwaters Planning Area Water Quality and Habitat Restoration Plan and TMDL for Sediment” and “Blackfoot River Watershed Restoration Action Plan” to identify partnership projects and water quality restoration strategies for improving water quality in the Blackfoot Headwaters.

Task 5 Responsible Parties: Blackfoot Challenge

Task 5 Timetable: July 2007 – July 2009

Task 5 Funding: **Total Costs:** $26,700.00
319 Costs: $16,000.00
Non-federal: $10,700.00 (Blackfoot Challenge – Unsecured)

Task 5 Outputs: Documentation of quarterly Blackfoot Headwaters Restoration Work Group meetings. Documentation of water quality improvements, projects developed, and best management practices implemented as a result of partnership coordination. Documentation of achievement of TMDL targets and allocations as a result of partnership coordination. Preliminary outline for five year monitoring of TMDL implementation.

Task 5 Acceptance Criteria: Documented evidence of an increased focus on water quality restoration and TMDL implementation in the Blackfoot Headwaters planning area through the formation of the Blackfoot Headwaters Restoration Work Group and at least five projects initiated or developed as a result of coordination of restoration partnership.

Task 6 – Administration

The purpose of this task is to ensure that the tasks described in this project are completed in a timely manner and on budget. This task will also ensure that 319 Program requirements are met and all products are delivered. This task includes $500 for travel and attendance at a Contract Administration Training sponsored by the Big Sky Public Procurement Association and DEQ.

Task 6 Responsible Parties: Blackfoot Challenge

Task 6 Timetable: July 2007 – July 2009

Task 6 Funding: **Total Costs:** $13,300.00
319 Costs: $7,975.00
Non-federal: $5,325.00 (Blackfoot Challenge – Secured).

Task 6 Outputs: Project summary documentation and budget tracking through status reports, annual reports and a final project report per DEQ Agreement in MS Office Suite compatible format. Fiscal reporting will be done on the Attachment B to this contract and submitted in hard copy format with original signature in blue ink.

Task 6 Acceptance Criteria: Project summary documentation and budget tracking through quarterly progress reports and a final project report. The final report will be completed according to DEQ guidelines.